

ABSTRACT

It is an object of the present invention to provide techniques for improving efficiency and torque of a motor while achieving thinning of the motor. In a brushless DC motor (1), a rotor (2) includes a magnetic-field creating magnet (5) and a stator (3) includes an armature winding (7). The magnetic-field creating magnet (5) and the armature winding (7) are placed to locally face in a radial direction (D) orthogonal to an axial direction (L). This reduces a thickness of the brushless DC motor (1) which extends in the axial direction (L). Also, a short-circuit yoke plate (59) for joining and magnetically short-circuiting the north pole and the south pole of a permanent magnet (51) is placed on a negative side in the axial direction (L) with respect to the magnetic-field creating magnet (5). By provision of the short-circuit yoke plate (59), a magnetic path on a negative side in the axial direction (L) with respect to the magnetic-field creating magnet (5) can be shortened. Accordingly, magnetic reluctance occurring during rotational movement of the brushless DC motor (1) can be reduced, to thereby improve efficiency and torque of the brushless DC motor (1).